

## C L A I M S.

1. An assembly (1) for performing parallel chemical experiments, in particular crystallisation experiments, said  
5 assembly comprising:

- a main body (2) having a first (3) and a second face (4) on opposite sides thereof, multiple bores (5) extending through said main body between said first and second face,
- tubular liners (6) having openings (7,8) at opposite ends  
10 thereof, each liner removably fitting in a bore in the main body,
- first closure means (10) for closing the openings of the liners at the first face of the main body,
- second closure means (15) for closing the openings of the  
15 liners at the second face of the main body,
- said first and second closure means (15,16) being fastenable to said main body, so that an experimentation chamber (20) is defined within each liner (6).

20 2. Assembly according to claim 1, wherein said first closure means comprise one or more elastic first sealing members and a first cover plate, so that said first sealing members are interpositioned between the ends of the tubular liners and the first cover plate.

25 3. Assembly according to claim 1 or 2, wherein said second closure means comprise one or more second elastic sealing members and a second cover plate, so that said second sealing members are interpositioned between the ends of the tubular  
30 liners and the second cover plate.

4. Assembly according to claims 1, wherein the tubular liners are each provided with at least one outwardly directed support projection and the bores in the main body are each provided with  
35 a corresponding recess for receiving the support projection.

5. Assembly according to claim 4, wherein the outwardly directed support projection is a circumferential support flange at one end of the tubular liner and the bores in the main body each form an annular recess for receiving said support flange.

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6. Assembly according to claim 2, wherein said first closure means comprise multiple first sealing members, each first sealing member engaging an end face of a liner.

10 7. Assembly according to claim 6, wherein the first face of the main body and/or the first cover plate is provided with recesses at the locations of the liner ends for receiving a first sealing member.

15 8. Assembly according to claim 3, wherein said second closure means comprise multiple second sealing members, each second sealing member engaging an end face of a liner.

20 9. Assembly according to claim 8, wherein the second face of the main body and/or the second cover plate is provided with recesses at the locations of the liner ends for receiving a second sealing member.

25 10. Assembly according to claim 2 or 3, wherein the first and/or second cover plate is provided with bores extending in line with the bores in the main body, and wherein the first and/or second sealing members are pierceable, such that e.g. a needle can be inserted into each experimentation chamber.

30 11. Assembly according to claim 6 and/or 8, wherein the first and/or second sealing members are sealing discs.

35 12. Assembly according to claim 2 or 3, wherein the first and/or second sealing members comprise a filter for filtering the contents of the experimentation chamber upon removal of said contents.

13. Assembly according to claim 12, wherein said first and/or second sealing members comprise an annular seal and a filter extending across the central opening of said seal.

5 14. A system for performing parallel chemical experiments in particular crystallisation experiments, said system comprising:  
- an experimentation assembly according to one or more of the preceding A system for performing parallel chemical experiments, in claims, and

10 - a filtration device having channels with inlets corresponding to the bores in the main body of the experimentation assembly and a filter in each channel, so that - after removal of the top cover plate of the experimentation assembly when in horizontal position and of the associated sealing member(s) - said  
15 filtration device can be brought against the top face of the main body, after which said system is reversed and the contents of the experimentation chambers enters said channels in the filtration device and is filtered.

20 15. A system according to claim 14, wherein said channels in said filtration device have outlets and wherein said system further comprises a collecting device having collecting chambers with inlets corresponding to the outlets of the filtration device, such that the filtered contents of the experimentation  
25 chambers can enter said collecting chambers.

16. A system for performing parallel chemical experiments, in particular crystallisation experiments, said system comprising:  
- an experimentation assembly according to one or more of the  
30 preceding claims, and  
- a press device having multiple press members corresponding to the liners of the experimentation assembly for pressing said liners into and/or out of the main body.

35 17. A system for performing parallel chemical experiments, in particular crystallisation experiments, said system comprising:

- an experimentation assembly according to one or more of the preceding claims, and
- heating means for heating the content in the experimentation chambers, e.g. for evaporating a solvent or bringing a solid  
5 into solution and effecting crystallisation by subsequent cooling.

18. A system according to claim 17, wherein said main body is a solid body of a heat conducting material, preferably a metal,  
10 and wherein said heating means are mounted in said main body and/or cover plate(s) or are adapted to contact said main body and/or cover plate(s).

19. A system according to claim 18, wherein the system further  
15 comprises a vapour discharge assembly, said assembly comprising multiple hollow needle members, each adapted to be pierced through a sealing member so that vapour discharges via said hollow needle.

20. A system according to claim 19, wherein said needles are upwardly directed and arranged to pierce through the sealing members sealing the bottom face of the experimentation assembly in horizontal orientation.

21. A system according to claim 10, wherein the system further  
25 comprises a feed assembly for feeding a substance into the experimentation chambers, said feed assembly comprising at least one hollow needle member adapted to be pierced through a sealing member.

30 22. A system according to claim 21, wherein said feed assembly is adapted to introduce an anti-solvent into the experimentation chambers.

35 23. Method for performing parallel chemical experiments, in particular crystallisation experiments, wherein use is made of

an assembly or system according to one or more of the preceding claims.

24. Method for performing parallel chemical experiments, in particular crystallisation experiments, wherein use is made of an assembly system according to claim 14, particular crystallisation experiments, comprising the effecting of crystallisation in the experimentation chambers, and - after removal of the top cover plate of the experimentation assembly when in horizontal position and of the associated sealing member(s) - said filtration device is brought against the top face of the main body, after which said system is reversed and the contents of the experimentation chambers enters said channels in the filtration device and is filtered.

25. Use of an assembly or system according to one or more of the preceding claims for solid form screening of molecules, e.g. salt screening, polymorph screening, enantiomer separation screening, in particular of active pharmaceutical ingredients.